20. Dabob Bay

Natural Area Preserve

Date(s) of Establishment: June, 1987 (Caicco 1989).

Establishing Agency/Organization(s): Washington Department of Natural Resources (DNR) and The Nature Conservancy, which helped acquire some of the land prior to transferring it to DNR.

Managing Agency/Organization(s): Washington Department of Natural Resources (DNR)

County: Jefferson

Location/Vicinity: At the northern end of Hood Canal, four miles northeast of Quilcene, near Dabob (**see Map 23**).

Marine Boundary Description/Discussion: The marine boundary of the Preserve encompasses tideflats and intertidal area. The northern boundary cuts across the middle of Tarboo Bay, while the southern and southwestern boundaries cut across Dabob Bay at an angle, roughly approximating the angle of Long Spit (**see Map 23**).

Adjacent or Overlapping Marine Protected Areas: None.

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES	Shoreline Length (if known)
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)		
no	N/A	yes	unknown	yes	unknown	187	unknown

Goals/Purpose/Objectives: The purposes of Natural Area Preserves are (DNR 1995):

1) to protect examples of undisturbed terrestrial and aquatic ecosystems, rare plant and animal species, and unique geologic features;

2) to serve as gene reserves;

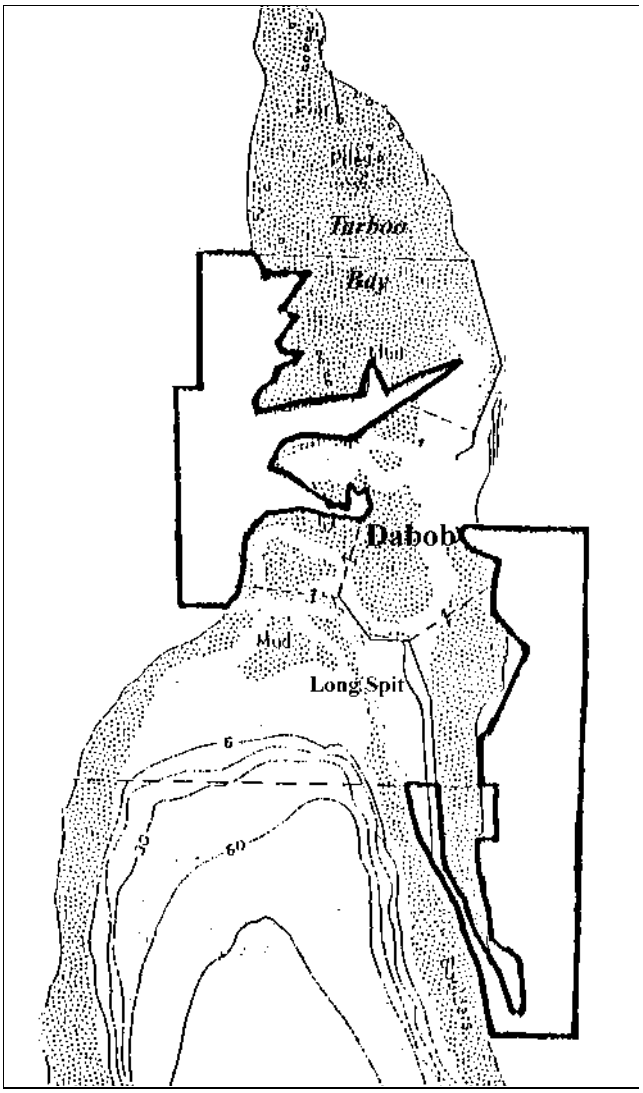
3) to serve as baselines against which the influences of human activities in similar, disturbed ecosystems may be compared; and

4) to provide outdoor laboratories for scientific research and education.

The Dabob Bay Natural Area Preserve was established to preserve representative examples of two types of intertidal salt marsh, low intertidal, high salinity, sandy marsh and high intertidal,

high salinity marsh; and to preserve a representative example of a coastal spit ecosystem in the Puget Trough physiographic province of Washington (DNR 1988a).

Map 23. Location of Dabob Bay Natural Area Preserve



Source: (DNR 1988a)

Primary Legal Authority

RCW 79.70.010 — Establishment of Natural Area Preserves authorized;
RCW 79.90 - 79.96 —Washington Aquatic Lands Act.

Natural and/or Cultural Resource Values/Highlights

The site contains low intertidal, high salinity, sandy marsh; high intertidal, high salinity marsh; coastal spits with native vegetation and composed of sand, gravel and cobbles; non-vegetated tideflats; forested upland; and a marine channel. The site contains the highest quality occurrence of *Festuca rubra* (red fescue) community on coastal spits in Washington (Kunze 1985b).

Compiled by Kunze (1985b) for the Washington Natural Heritage Program, a partial listing of plant species found at the site includes the following:

red fescue (*Festuca rubra*)
dune wildrye (*Elymus mollis*)
gumweed (*Grindelia integrifoia*)
saltbush (*Atriplex patula*)
salt grass (*Distichlis spicata*)
pickleweed (*Salicornia virginica*)
jaumea (*Jaumea cornosa*)
seaside plantain (*Plantago maritima*)
Douglas fir (*Pseudotsuga menziesii*)

An adjacent landowner cultivates oysters in the Bay, the waters of which have been certified Class A (Aberle, personal communication 1997).

Restrictions on Human Activities to Protect Marine Resources

In the marsh areas, dredging, filling, channel construction, diking, removal of soils, or rearrangement of soils are prohibited. Prohibited on the coastal spit are construction, placement or maintenance of structures such as jetties or other barricades which could alter natural sediment deposition and erosion processes. Trapping of wildlife species is prohibited, excepting approved research projects. Introduction of plants or animals is also prohibited, also excepting approved research projects. There are a number of other land use activity restrictions in place that, while not specifically targeted for marine protection, may indirectly protect the marine environment, such as bans on camping and vehicle use activities (DNR 1988a).

The site was previously used to gain access to oyster rafts, and roadfill was placed at the base of one of the spits (Kunze 1985b). Currently, however, the Preserve receives little human use, precluding the need for other restrictions such as fencing (Aberle, personal communication 1997).

The Preserve is open to approved scientific research projects and approved educational functions, but is closed to all other public activities (DNR 1988a).

MANAGEMENT OF THE SITE

Planning

Prior to this NAP's designation, planning documents referred to the area as the Tarboo Bay Natural Area Preserve. At that time a marine channel was included within the proposed boundaries (Aberle, personal communication 1996). In 1994, to conserve the land from development, The Nature Conservancy purchased two parcels of land to add to the Preserve, to be transferred to DNR when funds became available (TNC 1996a). Some of this land is now

owned by DNR, and some is still owned by The Nature Conservancy (Aberle, personal communication 1997).

A 14 member Natural Heritage Advisory Council advises on all NAP designations and management (DNR 1995). Upon designation of the Dabob Bay Natural Area Preserve, the marine channel was excluded from the final boundaries. According to a DNR Natural Areas Scientist, subtidal lands are not acquired and managed in the NAP program (Aberle, personal communication 1996).

Supervision/Enforcement

Management guidelines call for DNR staff (or volunteers) to visit the site once a month from May to November, and every other month during the December to April period, to inspect the preserve and report on signs of prohibited activities. Other duties during these visits include explaining site regulations to any visitors encountered, collection of litter, and dismantling of any manmade structures. The guiding principle for management is to allow natural processes to predominate, while controlling activities that modify natural processes (DNR 1988a).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

DNR conducts ecological monitoring, inventories and restoration at Dabob Bay. An amphibian and reptile survey was done on the upland portion of the Preserve, and in the summer of 1997, DNR staff worked to control invasive Scotch broom on the spit (Aberle, personal communication 1997).

Scientific study from researchers outside DNR is allowed upon approval of a written proposal. Educational use is focused on graduate education, but use by small groups of undergraduates or other interested groups may also be allowed. Educational use of the Preserve must also be proposed in writing and approved by DNR in advance (DNR 1988a).

DNR works with volunteers from time to time, including the oyster growers and volunteers from The Nature Conservancy and the Boy Scouts. There are plans to clean up marine debris with volunteer assistance in the coming year—styrofoam is a particular problem (Aberle, personal communication 1997).

For More Information:

Washington State Department of Natural Resources
Forest Resources Division
P.O. Box 47016
Olympia, WA 98504-7016

Telephone: (360) 902-1669
Fax: (360) 902-1783

21. Kennedy Creek

Natural Area Preserve

Date(s) of Establishment: Approximately 1990

Establishing Agency/Organization(s): Washington Department of Natural Resources (DNR)

Managing Agency/Organization(s): Washington Department of Natural Resources (DNR)

County: Mason and Thurston

Location/Vicinity: At the mouth of the Kennedy Creek Estuary, in southern Puget Sound (see **Map 24**). The Preserve is bisected by Highway 101.

Marine Boundary Description/Discussion: The marine boundary extends from the tideflats to the upper tidal reach of Schneider Creek. The northern marine boundary is depicted on **Map 24**.

Adjacent or Overlapping Marine Protected Areas: None.

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES	Shoreline Length (if known)
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)		
no	N/A	yes	unknown	yes	unknown	239	unknown

Property at the site is owned by nine landowners, including individuals, Washington Department of Transportation, and DNR (DNR n.d.). As of 1996, DNR had acquired ownership to 56.1 acres of the upland area (Aberle, personal communication 1996).

Goals/Purpose/Objectives: The purposes of Natural Area Preserves are (DNR 1995):

1) to protect examples of undisturbed terrestrial and aquatic ecosystems, rare plant and animal species, and unique geologic features;

2) to serve as gene reserves;

3) to serve as baselines against which the influences of human activities in similar, disturbed ecosystems may be compared; and

4) to provide outdoor laboratories for scientific research and education.

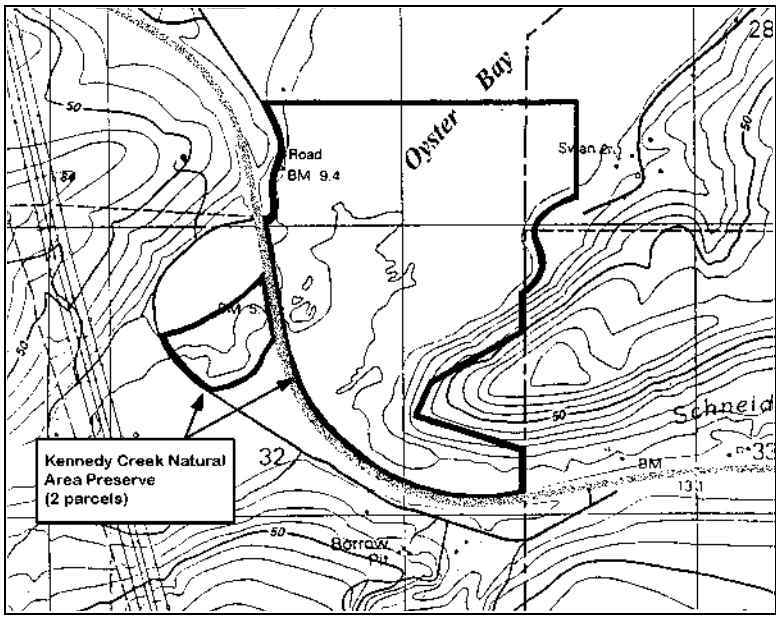
The Kennedy Creek Natural Area Preserve was established to preserve priority 1 and 2 wetland communities, as defined by the 1985 State of Washington Natural Heritage Plan. These are high intertidal, high salinity marsh; low intertidal, high salinity, silty marsh; and low intertidal, low

salinity, silty marsh. The objectives are to preserve habitat for a genetically distinct population of coho salmon and habitat for migrating and wintering shorebirds (DNR n.d.).

Primary Legal Authority

RCW 79.70.010 — Establishment of Natural Area Preserves authorized;
RCW 79.90 - 79.96 —Washington Aquatic Lands Act.

Map 24. Location of Kennedy Creek Natural Area Preserve



Source: (DNR n.d.)

Natural and/or Cultural Resource Values/Highlights

The Preserve contains three types of marshes, tideflats, forested uplands, and portions of Kennedy and Schneider Creeks. Portions of the marsh were formerly grazed, but are now recovering well. *Onchorynchus kisutch*, a genetically distinct population of coho salmon, spawn in Kennedy Creek and live there for several stages of their life cycles. Black-bellied plover, dunlin, and greater yellowlegs all winter here, and approximately 10,000 shorebirds (mostly western sandpipers) use the area during spring migration (DNR n.d.).

The area is popular with bird watchers and fishermen. An adjacent marsh area, which is not owned by DNR, is used for hunting (Aberle, personal communication 1997).

Restrictions on Human Activities to Protect Marine Resources

None at this time. It has been proposed that the access road leading to the Preserve be closed (DNR n.d.), but this has not occurred (Aberle, personal communication 1997).

MANAGEMENT OF THE SITE

Planning

A 14 member Natural Heritage Advisory Council advises on all NAP designations and management (DNR 1995).

Designation of the Kennedy Creek Natural Area Preserve alleviated the threat of proposed development for the area (DNR n.d.). Because of the small amount of acreage under DNR ownership, DNR has not yet completed a Management Plan or a Natural Features Report for this Preserve. Some planning work has been done however, regarding allowance of public access to the Preserve (Aberle, personal communication 1996) and posting interpretive signs. DNR has received funding through the Interagency Committee for Outdoor Recreation for interpretive signs and acquisition of additional acreage from willing sellers. The main body of the salt marsh is currently in private ownership. If more acreage is purchased, additional planning will occur at that time (Aberle, personal communication 1997).

Supervision/Enforcement

Although this site is not part of a regular DNR schedule for staff visitation; visits do occur perhaps six times per year. Additionally, as the site is next the highway, DNR staff are frequently able to informally check on the Preserve when passing by (Aberle, personal communication 1997).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

Scientific study from researchers outside DNR is allowed upon approval of a written proposal (DNR 1988).

For More Information:

Washington State Department of Natural Resources
Forest Resources Division
P.O. Box 47016
Olympia, WA 98504-7016
Telephone: (360) 902-1669
Fax: (360) 902-1783

22. Skookum Inlet

Natural Area Preserve

Date(s) of Establishment: 1986

Establishing Agency/Organization(s): Washington Department of Natural Resources (DNR)

Managing Agency/Organization(s): Washington Department of Natural Resources (DNR)

County: Mason

Location/Vicinity: In southern Puget Sound, between Shelton and Kamilche, on the north shore of Little Skookum Inlet (see **Map 25**).

Marine Boundary Description/Discussion: State-owned tidelands are included within the boundaries of this site (Kunze 1985a; Powell, personal communication 1997), including intertidal marsh and non-vegetated tideflat areas (see **Map 25**).

Adjacent or Overlapping Marine Protected Areas: None.

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL	Shoreline
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	ACRES	Length (if known)
no	N/A	yes	53	yes	21	74	unknown

Goals/Purpose/Objectives: The purposes of Natural Area Preserves are (DNR 1995):

1) to protect examples of undisturbed terrestrial and aquatic ecosystems, rare plant and animal species, and unique geologic features;

2) to serve as gene reserves;

3) to serve as baselines against which the influences of human activities in similar, disturbed ecosystems may be compared; and

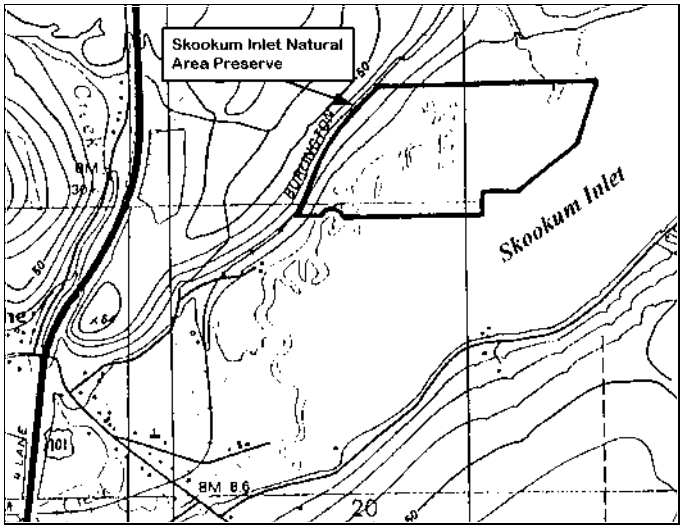
4) to provide outdoor laboratories for scientific research and education.

The Skookum Inlet Natural Area Preserve was established to protect representative examples of three types of wetland ecosystems in the Puget Trough physiographic province of Washington: 1) low intertidal, high salinity, silty marsh; 2) high intertidal, high salinity marsh; and 3) high intertidal, low salinity marsh (DNR 1989b).

Primary Legal Authority

RCW 79.70.010 — Establishment of Natural Area Preserves authorized;
RCW 79.90 - 79.96 — Washington Aquatic Lands Act.

Map 25. Location Map for Skookum Inlet Natural Area Preserve.



Source: (Kunze 1985a)

Natural and/or Cultural Resource Values/Highlights

The Preserve contains low intertidal, high salinity, silty marsh; high intertidal, high salinity marsh; high intertidal, low salinity marsh; tideflats; and upland second growth forest. The terraces are deeply incised by freshwater and tidal channels. Skookum Creek and Elson Creek provide fresh water for the Preserve (DNR 1989b; Friedman 1988).

Compiled by Kunze (1985a) for the Washington Natural Heritage Program, a partial listing of plant species found at the site includes the following:

saltgrass (*Distichlis spicata*)
(*Jaumea carnosa*)
pickleweed (*Salicornia virginica*)
seaside plantain (*Plantago maritima*)
seaside arrowgrass (*Triglochin maritimum*)
Lyngby's sedge (*Carex lyngbyei*)
mud rush (*Juncus gerardii*)
tufted hairgrass (*Deschampsia caespitosa*)
red fescue (*Festuca rubra*)
Douglas fir (*Pseudotsuga menziesii*)
big leafed maple (*Acer macrophyllum*)

Restrictions on Human Activities to Protect Marine Resources

A number of restrictions described in site's management plan (DNR 1989b) are consistent with protection of marine resources. These include the following:

- "The tideflats will not be managed for shellfish production or fisheries enhancement, or harvest (DNR 1989b), "except as part of an approved research project or management activity" (DNR 1989b).

- The Preserve is open to approved scientific research projects and approved educational activities, but is closed to all other public activities.

- Collection, removal, or damage of any living or dead organism or geological feature is prohibited except as part of an approved research project, educational project, or management activity. "No hunting" signs have been posted at the site (Kunze 1985a).

- Diking, ditching, road or trail construction, removal or rearrangement of soil, and all other activities that could alter water flow or salinity are prohibited, except as part of an approved research project or management activity.

Additionally, the site's management plan establishes a number of other land use activity restrictions that, while not targeted specifically for marine protection, may indirectly protect the marine environment. These restrictions include bans on camping and vehicle use activities (DNR 1989b).

MANAGEMENT OF THE SITE

Planning

A 14 member Natural Heritage Advisory Council advises on all NAP designations and management (DNR 1995). At this site, a Natural Features Report was prepared (Friedman 1988), and a management plan was written, but public participation did not occur to designate the site; the State Environmental Protection Act process does not apply to NAPs (Aberle, personal communication 1997).

Supervision/Enforcement

A guiding principle for Natural Area Preserve management is to allow natural processes to predominate, while controlling activities that modify natural processes. Management guidelines call for DNR staff (or volunteers) to visit the site once a month from May to November, and every other month during the December to April period, to inspect the preserve and report on signs of prohibited activities. Other duties during these visits include explaining site regulations to any visitors encountered, collection of litter, and dismantling of any manmade structures.

DNR staff are directed to visit the site at least twice a year, and whenever warranted by a management problem (DNR 1989b). As of 1985, there was little public use of the site, except for the occasional hunter (Kunze 1985a). As of 1997, DNR staff visits to the site were averaging

about twice per year. Volunteer stewards, such as students, also visit a few times each year (Aberle, personal communication 1997).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

Scientific study from researchers outside DNR is allowed upon approval of a written proposal. Educational use is focused on graduate education, but use by small groups of undergraduates or other interested groups may also be allowed. Educational use of the Preserve must also be proposed in writing and approved by DNR in advance (DNR 1989b).

Bird watching and horticultural groups occasionally make arrangements with DNR to visit the Preserve and observe its natural resources (Aberle, personal communication 1997).

For More Information:

Washington State Department of Natural Resources
Forest Resources Division
P.O. Box 47016
Olympia, WA 98504-7016
Telephone: (360) 902-1669
Fax: (360) 902-1783

23. San Juan Islands

National Wildlife Refuge

Date(s) of Establishment: 1914, with acquisition continuing through 1976

Establishing Agency/Organization(s): U.S. Fish and Wildlife Service

Managing Agency/Organization(s): U.S. Fish and Wildlife Service

Counties: San Juan, Island, and Skagit

Location/Vicinity: The San Juan Islands National Wildlife Refuge consists of 83 rocks, reefs and islands throughout the San Juan Archipelago, in northern Puget Sound, comprising 449 acres. (**see Map 26**).

Marine Boundary Description/Discussion: Although it is understood that the seaward boundary of the Refuge is the line of mean high tide (Vicencio 1996), some of the 9 acres of reefs, said to be "awash" at high tide, are considered here as intertidal area. Additionally, vessels are discouraged within a 200-yard marine buffer area surrounding all but two Refuge sites.

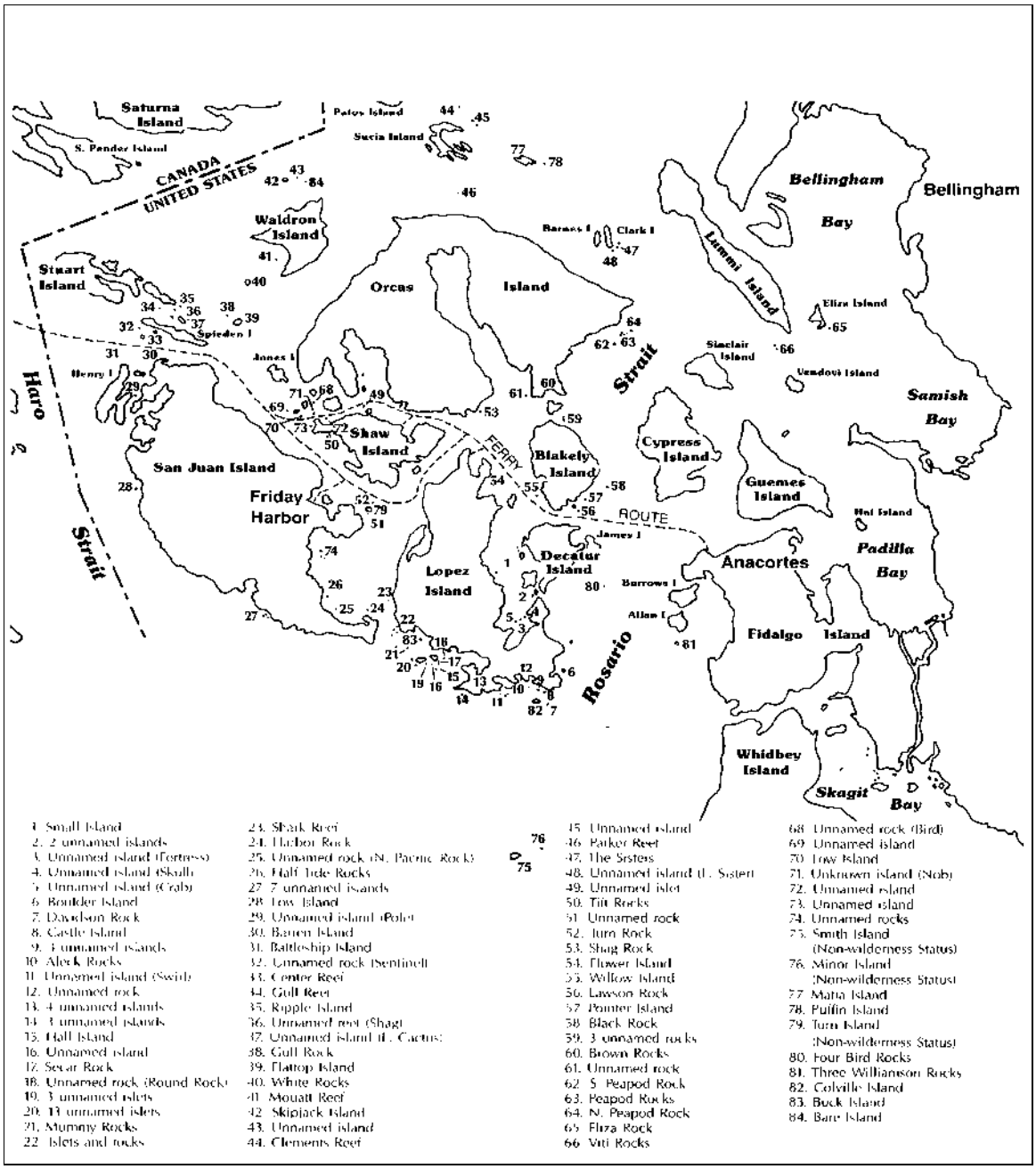
Adjacent or Overlapping Marine Protected Areas: San Juan Island Marine Biological Preserve, Matia Island Marine State Park, Turn Island Marine State Park, and Voluntary No-Take Bottomfish Recovery Area sites at Gull Rock and Bare Island.

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES	Shoreline Length (if known)
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)		
no	N/A	yes	unknown	yes	unknown	449	unknown

Goals/Purpose/Objectives: The mission of the NWR System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (USFWS 1997c).

Map 26. San Juan Islands National Wildlife Refuge



1. Small Island
2. 2 unnamed islands
3. Unnamed island (Fortress)
4. Unnamed island (Skull)
5. Unnamed island (Crab)
6. Boulder Island
7. Davidson Rock
8. Castle Island
9. 3 unnamed islands
10. Aleck Rocks
11. Unnamed island (Swirl)
12. Unnamed rock
13. 4 unnamed islands
14. 3 unnamed islands
15. Hall Island
16. Unnamed island
17. Secar Rock
18. Unnamed rock (Round Rock)
19. 3 unnamed islets
20. 13 unnamed islets
21. Mummy Rocks
22. Islets and rocks
23. Shark Reef
24. Harbor Rock
25. Unnamed rock (N. Pacific Rock)
26. Half Tide Rocks
27. 7 unnamed islands
28. Low Island
29. Unnamed island (Pole)
30. Barren Island
31. Battleship Island
32. Unnamed rock (Sentinel)
33. Center Reef
34. Gull Reef
35. Ripple Island
36. Unnamed rock (Shag)
37. Unnamed island (L. Cactus)
38. Gull Rock
39. Flattop Island
40. White Rocks
41. Mouatt Reef
42. Skipjack Island
43. Unnamed island
44. Clements Reef
45. Unnamed island
46. Parker Reef
47. The Sisters
48. Unnamed island (L. Sister)
49. Unnamed islet
50. Tilt Rocks
51. Unnamed rock
52. Turn Rock
53. Shag Rock
54. Flower Island
55. Willow Island
56. Lawson Rock
57. Pointer Island
58. Black Rock
59. 3 unnamed rocks
60. Brown Rocks
61. Unnamed rock
62. S. Peapod Rock
63. Peapod Rocks
64. N. Peapod Rock
65. Eliza Rock
66. Viti Rocks
67. Unnamed rock (Bird)
69. Unnamed island
70. Low Island
71. Unknown island (Nob)
72. Unnamed island
73. Unnamed island
74. Unnamed rocks
75. Smith Island (Non-wilderness Status)
76. Minor Island (Non-wilderness Status)
77. Matia Island
78. Puffin Island
79. Turn Island (Non-wilderness Status)
80. Four Bird Rocks
81. Three Williamson Rocks
82. Colville Island
83. Buck Island
84. Bare Island

Map Source: U.S. Fish and Wildlife Service

The following are long range goals of the NWR System:

- To preserve, restore, and enhance in their natural ecosystem (when practicable) all species of animals and plants that are endangered or threatened with becoming endangered;
- To perpetuate the migratory bird resource;
- To preserve a natural diversity and abundance of fauna and flora on refuge lands;
- To provide an understanding and appreciation of fish and wildlife ecology and people's role in their environment, and to provide refuge visitors with high quality, safe, wholesome and enjoyable recreational experiences oriented toward wildlife, to the extent these activities are compatible for which the refuge was established (USFWS 1997b).

The primary purpose of the San Juan Island National Wildlife Refuge is to "facilitate the management of migratory birds for which the United States has a responsibility under international treaties and to further effectuate the purposes of the Migratory Bird Conservation Act" (USFWS 1986). Specific goals set for this Refuge are:

(1) To protect and preserve habitat to support populations of resting and nesting seabirds, gulls, and shorebirds of levels not less than current populations;

(2) To preserve and manage habitat capable of supporting a diversity of wildlife, with special emphasis on bald eagles and harbor seals at current levels of use;

(3) To provide public information and interpretation of the wildlife resources of the Refuge;

(4) To provide wildlife-oriented public recreation while discouraging non-wildlife oriented and non-conforming uses on the Refuge; and

(5) To cooperate with other agencies, institutions of higher education, and private organizations and individuals in providing technical assistance and research opportunities (USFWS 1986).

Primary Legal Authority

National Wildlife Refuge System Improvement Act of 1997 (P.L. 105-57);
Refuge Recreation Act of 1962 (U.S.C. 460k-460k-4);
Refuge Trespass Act of 1909.

Natural and/or Cultural Resource Values/Highlights

The Refuge, which consists of four types of habitats—reefs, rocks, grassy islands and forested islands (U.S. Department of the Interior, Fish and Wildlife Service N.d.)—provides nesting and loafing sites for several seabird species, such as glaucous-winged gulls, cormorants, pigeon guillemots, rhinoceros auklets, black oystercatchers, and a variety shorebirds. Harlequin ducks and black brant traditionally brood and molt on the islands. Harbor seals haul out on several islands, while whales feed offshore. The islands also provide habitat for endangered and threatened species such as peregrine falcons and bald eagles (USFWS 1986).

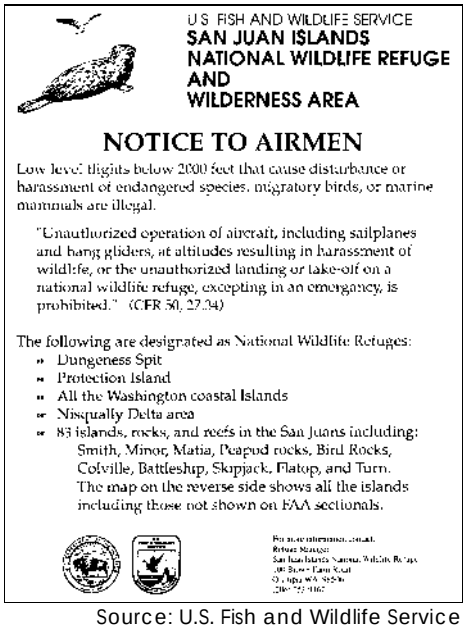
All of the Refuge Islands except Smith, Minor, and Turn and one five-acre tract on Matia Island are part of the San Juan National Wilderness, established in 1976 (USFWS 1986).

Restrictions on Human Activities to Protect Marine Resources

This Refuge is nearly completely closed to public use, and signs are posted on all closed islands. Such strict closure is necessary for protection of easily disturbed seabirds, shorebirds, marine mammals and endangered species. However, at two of the larger Refuge islands (Turn and Matia), there are Marine State Park campgrounds, and camping and hiking are allowed (USFWS 1990). Fishing and hunting are not allowed on San Juan Islands Refuge property; and collection of biota is also prohibited unless a permit is issued (Vicencio 1996).

There is an advisory for aircraft to remain 2,000 feet above National Wildlife Refuge Islands (**Figure 13**). Some on-site signage, as well as brochures and other materials posted and distributed off site, advise boaters to stay 200 yards from Refuge sites (other than moorage areas at Turn and Matia Islands) (**Figure 14**). However, these public aquatic lands have not been withdrawn by DNR or leased to the USFWS. The 200 yard Refuge approach limit is advisory in nature, not backed by a specific law or legal authority (other than instances when the Marine Mammal Protection Act would be applicable).

Figure 13. Aircraft Advisory for San Juan Islands National Wildlife Refuge



U.S. FISH AND WILDLIFE SERVICE
SAN JUAN ISLANDS
NATIONAL WILDLIFE REFUGE
AND
WILDERNESS AREA

NOTICE TO AIRMEN

Low level flights below 2000 feet that cause disturbance or harassment of endangered species, migratory birds, or marine mammals are illegal.

"Unauthorized operation of aircraft, including sailplanes and hang gliders, at altitudes resulting in harassment of wildlife, or the unauthorized landing or take-off on a national wildlife refuge, excepting in an emergency, is prohibited." (CFR 50, 27.34)

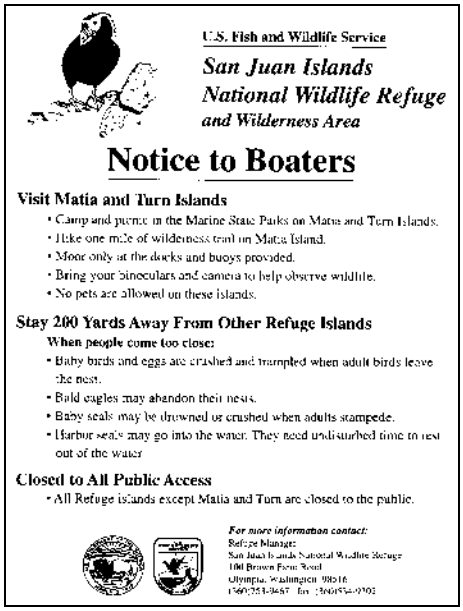
The following are designated as National Wildlife Refuges:

- Dungeness Spit
- Protection Island
- All the Washington coastal Islands
- Nisqually Delta area
- 83 islands, rocks, and reefs in the San Juans including: Smith, Minor, Matia, Peapod rocks, Bird Rocks, Colville, Battleship, Skipjack, Flattop, and Turn. The map on the reverse side shows all the islands including those not shown on FAA sectionals.

For more information contact:
Refuge Manager
San Juan Islands National Wildlife Refuge
100 Brown Farm Road
Olympia, WA 98516
(360) 753-9467

Source: U.S. Fish and Wildlife Service

Figure 14. Advisory of Marine Buffer Area at San Juan Islands National Wildlife Refuge



U.S. Fish and Wildlife Service
San Juan Islands
National Wildlife Refuge
and Wilderness Area

Notice to Boaters

Visit Matia and Turn Islands

- Camp and picnic in the Marine State Parks on Matia and Turn Islands.
- Hike one mile of wilderness trail on Matia Island.
- Moor only at the docks and buoys provided.
- Bring your binoculars and camera to help observe wildlife.
- No pets are allowed on these islands.

Stay 200 Yards Away From Other Refuge Islands

When people come too close:

- Baby birds and eggs are crushed and trampled when adult birds leave the nest.
- Bald eagles may abandon their nests.
- Baby seals may be drowned or crushed when adults stampede.
- Harbor seals may go into the water. They need undisturbed time to rest out of the water

Closed to All Public Access

- All Refuge islands except Matia and Turn are closed to the public.

For more information contact:
Refuge Manager
San Juan Islands National Wildlife Refuge
100 Brown Farm Road
Olympia, Washington 98516
(360)753-9467 fax (360)534-9302

Source: U.S. Fish and Wildlife Service

MANAGEMENT OF THE SITE

Planning

Partners in planning and management include the Washington State Parks and Recreation Commission, with which the USFWS has a Memoranda of Understanding (MOU) to oversee and manage day use and camping at Matia and Turn Islands; the U.S. Coast Guard, with which the USFWS has an MOU so that they may maintain aids to navigation on 19 of the islands; and the Friday Harbor Whale Museum, which provides information and education to the public about the San Juan Islands National Wildlife Refuge (USFWS 1986; Vicencio 1996).

Current management objectives are clearly stated and are consistent with protection and conservation of marine resources, and they also support identifiable and measurable outcomes (Vicencio 1996). To further improve management, the USFWS has plans to do comprehensive conservation planning for the National Wildlife Refuges; all plans nationwide will be completed within 15 years. Some of the plans may involve multiple Refuges. Planning for this Refuge will begin after completion of the Nisqually National Wildlife Refuge plan, which will be in 1999 (Takekawa, personal communication 1997a).

Supervision/Enforcement

USFWS on-site management is very limited due to budgetary and personnel ceiling constraints. Supervision by USFWS occurs during biological survey and maintenance visits for 1-2 weeks in the summer. State Parks boat-based rangers and summer volunteers associated with the Whale Museum and USFWS provide additional seasonally-limited presence (Vicencio 1996). USFWS donated a boat to the Whale Museum to support the efforts of the volunteers, who do interpretive work on the water as well as some monitoring (Wingrove 1996). USFWS staff have reported trespassing, wildlife disturbance and collection of some intertidal organisms (such as sea urchins) to be growing problems. One enforcement obstacle sometimes encountered is that it can be difficult to prove harassment or disturbance to wildlife as a prosecutable offense (Vicencio 1996), and all of the islands are easily accessible and are used by the boating public (USFWS 1990). Also, enforcement of the 2,000 foot ceiling for aircraft is difficult, since the ceiling is advisory in nature and staff are on the ground (Wingrove 1996).

It has been suggested that an aquatic land lease to establish a marine buffer area (such as that provided found at Protection Island NWR) around larger islands might be one step toward reducing boat-based and island trespass disturbances (Vicencio 1996).

A special agent (from a separate USFWS enforcement branch, based in Bellingham), along with the Refuge Manager, sometimes visit the islands unannounced to enforce regulations such as the 200 yard buffer around the islands (Takekawa, personal communication 1997a). The focus is preventative education for boaters. Contact is made with boaters who are too close to the islands and they are provided with materials about the buffer zones. In addition, contact is made with local groups, such as commercial kayak businesses, and they too are provided with material about the Refuge's sensitivity (Takekawa, personal communication 1997a).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

Public education efforts are tied to enforcement and include signage, brochures and other contact with the public aimed at creating awareness of and concern for the Refuge and related resource problems (USFWS 1990). Interpretive work, including activities on the water, is carried out by external groups such as the Friday Harbor Whale Museum and through the seasonal efforts of volunteers (USFWS 1990). One USFWS staff member conducts outreach for eight National Wildlife Refuges in the Refuge Complex.

Few outside organizations have conducted research at the Refuge; one example is a NOAA marine mammal and seabird research project in 1979 (USFWS 1986). For its part, the USFWS conducts annual seabird and harbor seal surveys, as well as performing exotic vegetation control; but no ecological assessments have been undertaken to determine the effectiveness of the MPA (Vicencio 1996).

For More Information:

San Juan Islands NWR
c/o Nisqually National Wildlife Refuge Complex
100 Brown Farm Road
Olympia, WA 98516
Telephone: (360) 753-9467
Fax: (360) 534-9302

24. Protection Island

National Wildlife Refuge

Date(s) of Establishment: August 26, 1988

Establishing Agency/Organization(s): U.S. Fish and Wildlife Service (USFWS)

Managing Agency/Organization(s): U.S. Fish and Wildlife Service

County: Jefferson

Location/Vicinity: Protection Island National Wildlife Refuge is located on Protection Island, which is in the eastern Strait of Juan de Fuca, at the mouth of Discovery Bay and 10 miles northwest of Port Townsend (**see Map 27**).

Marine Boundary Description/Discussion: In addition to 316 upland acres, the Refuge includes a surrounding marine buffer area of approximately 343 acres, split, in unknown proportions, between subtidal and intertidal acreage. In 1988, DNR reserved and withdrew from conflicting uses, for an indefinite term, the bedlands surrounding the entire island and extending 600 feet offshore from the line of extreme low tide (DNR 1988c; Edens, personal communication 1997a). In 1993, DNR leased tidelands to the USFWS for no fee until the end of 2013.

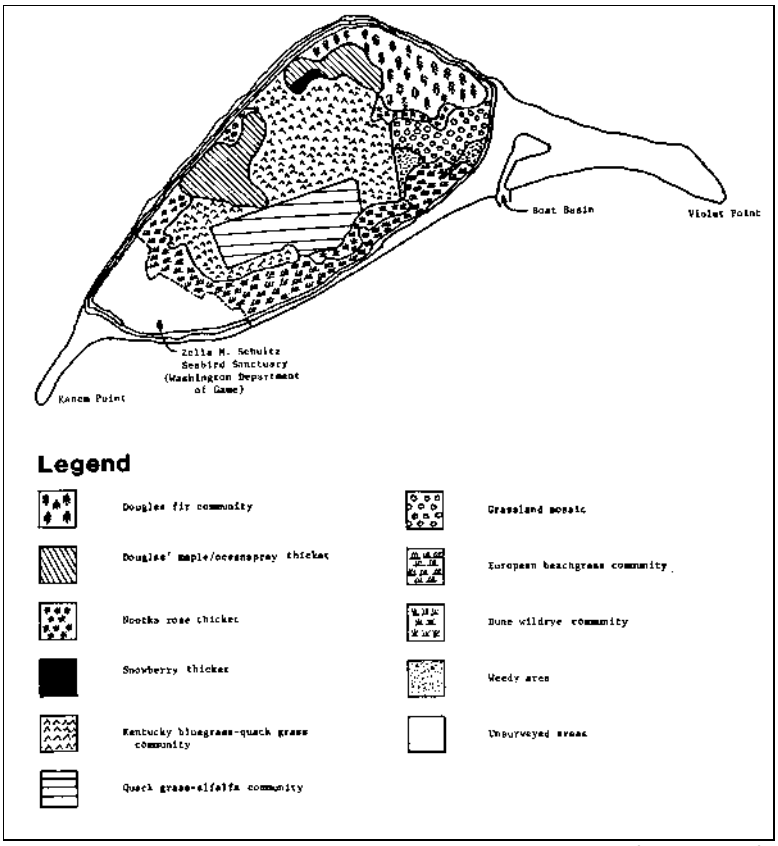
Adjacent or Overlapping Marine Protected Areas: Zella M. Schultz/Protection Island Seabird Sanctuary, consisting of 48 acres on the western tip of Protection Island. The Seabird Sanctuary is a Washington State Department of Fish and Wildlife (WDFW) site, cooperatively managed with the USFWS (Sanguinetti, personal communication 1997).

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	
yes	unknown	yes	unknown	yes	316	659

Goals/Purpose/Objectives: The mission of the NWR System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (USFWS 1997c).

Map 27. Protection Island National Wildlife Refuge (Vegetation Map)



Source: (USFWS 1985)

The following are long range goals of the NWR System:

- To preserve, restore, and enhance in their natural ecosystem (when practicable) all species of animals and plants that are endangered or threatened with becoming endangered;
- To perpetuate the migratory bird resource;
- To preserve a natural diversity and abundance of fauna and flora on refuge lands;
- To provide an understanding and appreciation of fish and wildlife ecology and people's role in their environment, and to provide refuge visitors with high quality, safe, wholesome and enjoyable recreational experiences oriented toward wildlife, to the extent these activities are compatible for which the refuge was established (USFWS 1997).

The Protection Island National Wildlife Refuge was officially designated to "provide habitat for a broad diversity of bird species, with particular emphasis on protecting the nesting habitat of the bald eagle, tufted puffin, rhinoceros auklet, pigeon guillemot, and pelagic cormorant; to protect the hauling-out area of harbor seals; and to provide for scientific research and wildlife-oriented public education and interpretation" (USFWS 1985).

Primary Legal Authority

Act to establish the Protection Island National Wildlife Refuge [P.L. 97-333 (10/15/82)]; National Wildlife Refuge System Improvement Act of 1997 (P.L. 105-57); Refuge Recreation Act of 1962 (U.S.C. 460k-460k-4); Refuge Trespass Act of 1909; Aquatic Lands Act (RCW 79.90-79.96), as pertains to the lease and withdrawal of aquatic lands.

Natural and/or Cultural Resource Values/Highlights

The 364 acre island supports a high concentration of breeding seabirds—72% of the seabirds in Puget Sound (U.S. Department of the Interior N.d.). These include rhinoceros auklets, tufted puffins, glaucous-winged gulls, pigeon guillemots, pelagic cormorants, and double-crested cormorants. Black oystercatchers and bald eagles are also present. The sand spits at both ends of the island provide important haulout areas for harbor seals, and one spit supports seal pupping. Orcas and gray whales use the waters near the island (Hirsch 1981; USFWS 1985). A 1981 assessment by Hirsch (1981) noted some of the marine resources at Kanem Shoal, including butter clams, little neck clams, horse clams, and geoducks, as well as polychaete worms, starfish, and many species of algae in the intertidal area (Hirsch 1981). Dallas Bank, which extends north of the Island, is partially covered by kelp and eelgrass (*Zostera marina*) (Hirsch 1981).

Restrictions on Human Activities to Protect Marine Resources

Because of its status as a National Wildlife Refuge and the sensitivity of its resources, Protection Island is closed to public access, except for a few remaining private property owners. No planes or helicopters are allowed to land (Edens, personal communication 1997a), and signs posted on shore advise boaters to remain 200 yards from the island. There is also an advisory for aircraft to remain 2,000 feet above National Wildlife Refuge islands. USFWS has a no fee lease on the bedlands and the tidelands; they are also reserved from conflicting uses by DNR (DNR 1988c).

The strict no access policy and marine buffer zone are deemed necessary to provide disturbance-free habitat suitable for seabird nesting and harbor seal use.

MANAGEMENT OF THE SITE

Planning

Prior to the Sanctuary's establishment, Protection Island supported sheep farming and then was sold and platted for development. Much of the island was bulldozed to prepare for house and road building, and breeding seabird colonies, including a puffin colony, were damaged in the process. In 1974, The Nature Conservancy bought the western, unplatted end of the island, which was later sold to the Washington Department of Game (now WDFW) (Leschner, personal communication 1997). The Refuge was established subsequently, to provide further protection for the natural resources. As was noted at the time regarding the establishment of the Refuge: "the Washington Department of Game's seabird sanctuary would be complemented, Jefferson County would receive payment from the USFWS in lieu of taxes; the existing conflict between local and state government, the developer, and lot owners, regarding whether or not further development of homesites should be allowed, would be resolved" (Larsen 1982).

There is a management plan for the Refuge, and the public as well as concerned government agencies were informed and encouraged to participate in the planning process. The Admiralty Audubon Society was one organization that provided local support to help get the Refuge established (USFWS 1985; Sanguinetti, personal communication 1997). To further improve management, the USFWS has plans to do comprehensive conservation planning for the National Wildlife Refuges; all plans nationwide will be completed within 15 years. Some of the plans may involve multiple Refuges. Planning for this Refuge will begin after completion of the Nisqually National Wildlife Refuge plan, which is expected to be in 1999 (Takekawa, personal communication 1997a).

Current management objectives are clearly stated and are consistent with the protection and conservation of marine resources. They support identifiable and measurable outcomes, and are closely carried out. However, staffing and financial resources are limited (Edens 1997b). At one time, there was a plan to allow public access to the site, which included mooring buoys (Leschner, personal communication 1997), but it was never implemented.

The USFWS, following objectives in its master plan for Protection Island National Wildlife Refuge (USFWS 1985), negotiates Memoranda of Understanding (MOU) with WDFW that cover management of the two areas. The most recent MOU was signed in 1995 and remains in effect until either party cancels it for noncompliance or the agreement is no longer needed. Each agency allows the other access to its protected area; research proposals involving both areas require the approval of both agencies; and they are to keep each other informed of short and long term management strategies (WDFW and USFWS 1995). In practice, USFWS staff are on the Island more frequently than WDFW staff, and thus often take the lead in managing both areas. As specified by the MOU, USFWS staff inform WDFW staff when they undertake special actions for the site, such as implementing a beach cleanup with members of the public (Sanguinetti, personal communication 1997). In addition to the MOU with WDFW, the USFWS also has an agreement with the National Marine Fisheries Service concerning protection of marine mammals (Edens 1997b).

Supervision/Enforcement

Operation and maintenance of the Refuge is provided by a volunteer caretaker that lives on site, and through weekly visits by maintenance staff, the Refuge manager and a biologist (Edens 1997b). WDFW staff are also present periodically (Schirato, personal communication 1997). USFWS representatives use radar to determine if boats are entering the buffer zone, and boaters are informally approached to give them information about the zone (Takekawa, personal communication 1997a). If necessary, the Refuge Manager will enforce the closed marine buffer zone.

The Refuge Manager and the Assistant Complex Manager (based at USFWS's Nisqually Complex) provide part time enforcement of regulations, and other enforcement officers based in Olympia are available if needed (Sanguinetti, personal communication 1997).

Even with the regular USFWS presence, local recreational use has been identified by the USFWS as a primary threat to marine resources (Edens 1997b).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

The Refuge supports approved research projects, such as annual bird surveys (Wingrove 1996), but is not a focal point for on-site public education and outreach activities. The exception to this is occasional beach cleanups, which are arranged by the USFWS as needed and are tightly organized events which utilize volunteers from local organizations, such as the Port Townsend Marine Science Center (Sanguinetti, personal communication 1997). USFWS has not performed ecological assessments to determine the effectiveness of the Refuge, nor has the site's marine resources been scientifically characterized (Edens 1997b).

One USFWS staff member conducts outreach for eight National Wildlife Refuges in the Refuge Complex, including this site.

For More Information:

U.S. Fish and Wildlife Service
Washington Coastal Refuges
33 So. Barr Rd.
Port Angeles, WA 98362
Telephone: (360) 457-8451
Fax: (360) 457-9778

25. Zella M. Schultz/Protection Island

Seabird Sanctuary

Date(s) of Establishment: May 31, 1975 (dedication date)

Establishing Agency/Organization(s): Washington Department of Game (now Washington Department of Fish and Wildlife). Initial acquisition assistance from the Washington Interagency Committee for Outdoor Recreation (IAC) and The Nature Conservancy.

Managing Agency/Organization(s): Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service (USFWS).

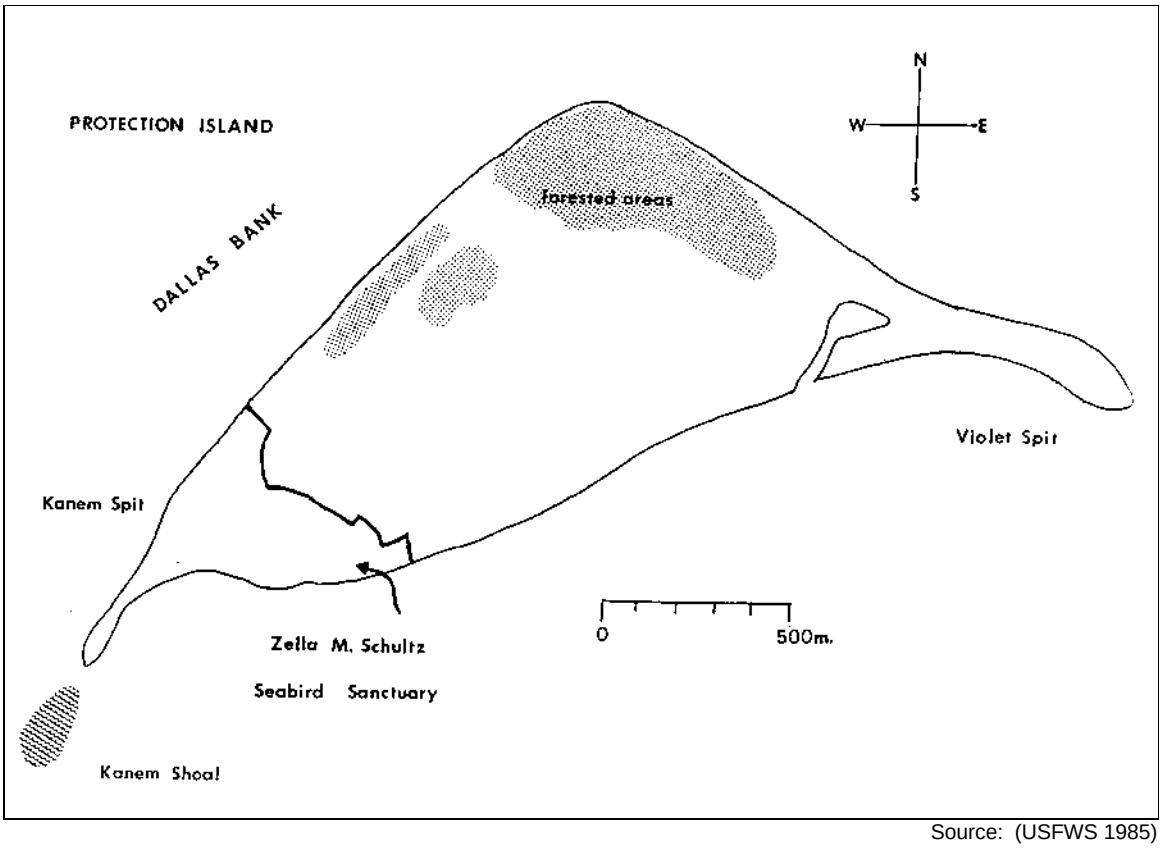
County: Jefferson

Location/Vicinity: The Seabird Sanctuary is on the western tip of Protection Island, which is located in the eastern Strait of Juan de Fuca at the mouth of Discovery Bay and 10 miles northwest of Port Townsend (**see Map 28**).

Marine Boundary Description/Discussion: While the seaward extent of the Sanctuary's property line is not clear, there is a marine buffer area around Protection Island of some 350 acres, split, in unknown proportions, between subtidal and intertidal acreage. In 1988, the Washington Department of Natural Resources (DNR) reserved and withdrew from conflicting uses, for an indefinite term, the public tidelands and bedlands surrounding the entire island and extending 600 feet offshore from the line of extreme low tide (DNR 1988c; Edens, personal communication 1997a). In 1993, DNR leased the aquatic lands for no fee to the U.S. Fish and Wildlife Service, which operates the adjoining Protection Island National Wildlife Refuge, until the end of 2013. Though there is no agreement with WDFW, the DNR withdrawal order acknowledges that "the state-owned bedlands adjacent to the Protection Island National Wildlife Refuge and the Zella M. Schultz Seabird Sanctuary are an integral part of the refuge and the sanctuary and provide a buffer for protection from conflicting uses" (DNR 1988c).

Adjacent or Overlapping Marine Protected Areas: Protection Island National Wildlife Refuge.

Map 28. Zella M. Schultz/Protection Island Seabird Sanctuary.



Source: (USFWS 1985)

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES	Shoreline Length
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)		(if known)
yes	approx. 1	yes	unknown	yes	unknown	48	unknown

Goals/Purpose/Objectives: The Protection Island/Zella M. Schultz Seabird Sanctuary was designated by the Washington Department of Game (now Fish and Wildlife) as a Natural Area—lands of unique character with special wildlife habitat values secured for preservation in their natural state. The Seabird Sanctuary is named in memory of Zella M. Schultz, a well known local ornithologist and painter. The general objectives of the Sanctuary are preservation (of habitat for seabirds and other wildlife) and education (Hirsch 1981). The management goals of the Sanctuary are to (Hirsch 1981):

1) manage land to protect the wildlife resources;
2) leave the site in natural condition;
3) provide public education if it can be accomplished without disturbing wildlife populations;
4) continue to allow research on seabirds and marine mammals as long as such activities are not detrimental to wildlife; and

5) develop the project with minimum cost, minimum maintenance and minimum supervision in mind.

Also appropriate here are USFWS goals, since the agency manages Protection Island as a whole, and since the National Wildlife Refuge designation complements the Seabird Sanctuary designation. The long range goals of the National Wildlife System are:

- To preserve, restore, and enhance in their natural ecosystem (when practicable) all species of animals and plants that are endangered or threatened with becoming endangered;
- To perpetuate the migratory bird resource;
- To preserve a natural diversity and abundance of fauna and flora on refuge lands;
- To provide an understanding and appreciation of fish and wildlife ecology and people's role in their environment, and to provide refuge visitors with high quality, safe, wholesome and enjoyable recreational experiences oriented toward wildlife, to the extent these activities are compatible for which the refuge was established (USFWS 1997).

The Protection Island National Wildlife Refuge was officially designated to "provide habitat for a broad diversity of bird species, with particular emphasis on protecting the nesting habitat of the bald eagle, tufted puffin, rhinoceros auklet, pigeon guillemot, and pelagic cormorant; to protect the hauling-out area of harbor seals; and to provide for scientific research and wildlife-oriented public education and interpretation" (USFWS 1985).

Legal Authority

RCW 77.04 — Washington's Wildlife Code; directs WDFW to establish wildlife policies to preserve, protect, and perpetuate fish and wildlife.

Aquatic Lands Act (RCW 79.90-79.96), as pertains to the withdrawal of aquatic lands.

Natural and/or Cultural Resource Values/Highlights

The Sanctuary is important for its seabird habitat. The upland portion of the Sanctuary is partly composed of a sandy spit, cliffs and a plateau (USFWS 1985), and the area supports 30% of Protection Island's seabirds (Cyra 1982). Overall, Protection Island supports 72% of the seabirds in Puget Sound (U.S. Department of the Interior N.d.). These include rhinoceros auklets, tufted puffins, glaucous-winged gulls, pigeon guillemots, pelagic cormorants, and double-crested cormorants. Black oystercatchers and bald eagles are also found (Hirsch 1981; USFWS 1985).

Seals rest on Kanem spit but do not pup there (USFWS 1985), and orcas and gray whales may use the waters near the island. A 1981 assessment by Hirsch (1981) noted some of the marine resources at Kanem Shoal, including butter clams, little neck clams, horse clams, and geoducks, as well as polychaete worms, starfish, and many species of algae in the intertidal area (Hirsch 1981).

Restrictions on Human Activities to Protect Marine Resources

Because this site is co-managed by USFWS staff consistent with management policies at the adjacent Protection Island National Wildlife Refuge, the Sanctuary is closed to public access except for a few remaining private property owners. No planes or helicopters are allowed to land (Edens, personal communication 1997a), and signs posted on shore advise boaters to remain 200 yards from the island. There is also an advisory for aircraft to remain 2,000 feet above National Wildlife Refuge Islands (which is thus applicable to this site). USFWS has a no fee lease on the bedlands and the tidelands; they are also reserved from conflicting uses by DNR (DNR 1988c).

The island's USFWS-enforced strict no access policy and marine approach advisory are deemed necessary to provide disturbance-free habitat suitable for harbor seal use and seabird nesting. Guillemot and auklet nesting habitats are vulnerable to habitat destruction at the Sanctuary (Cyra 1982).

When WDFW officers are present at the Sanctuary, they enforce policies that have been in place since the 1980s (Schirato, personal communication 1997). Those policies included restricting people to the beaches and trails; advising people to avoid disturbance to seabirds during the breeding season from April to September (particularly disturbance to pigeon guillemot nests in driftwood and to cliff-dwelling pelagic cormorants) (Hirsch 1981); and bans on motor vehicle entry, overnight camping, open fires, and pets off leashes (Cyra 1982).

MANAGEMENT OF THE SITE

Planning

Prior to the Sanctuary's establishment, Protection Island supported sheep farming and then was sold and platted for development. Much of the island was bulldozed to prepare for house and road building, and breeding seabird colonies, including a puffin colony, were damaged in the process. In 1974, The Nature Conservancy bought the western, unplatted end of the island, which was later sold to the Washington Department of Game. At one time, there was a plan to allow public access to the site, which included mooring buoys (Leschner, personal communication 1997), but it was never implemented.

The USFWS, following objectives in its master plan for the adjacent Protection Island National Wildlife Refuge (USFWS 1985), negotiates Memoranda of Understanding (MOU) with WDFW that cover management of the two sites. The most recent MOU was signed in 1995 and remains in effect until either party cancels it for noncompliance or the agreement is no longer needed. Each agency allows the other access to its protected area. Research proposals involving both areas require the approval of both agencies, and they are to keep each other informed of short and long term management strategies (WDFW and USFWS 1995). In practice, USFWS staff are on the Island more frequently than WDFW staff, and thus often take the lead in managing both areas. As specified by the MOU, USFWS staff inform WDFW staff when they undertake special actions for the site, such as implementing a beach cleanup with members of the public (Sanguinetti, personal communication 1997).

Other than MOUs with the USFWS, WDFW has not developed new plans or other management documents for the Sanctuary since the 1980s. Given this, and due to and the fact that the island has remained closed to public access, the public is not currently involved in planning for the site (Schirato, personal communication 1997).

Within the USFWS, there are plans to do comprehensive conservation planning for all the National Wildlife Refuges; any plan for Protection Island would likely contain a section on cooperative management of the Seabird Sanctuary. All plans nationwide will be completed within 15 years, and some of the plans may involve multiple refuges. Planning for Protection Island will begin after completion of the Nisqually National Wildlife Refuge plan, which is expected to be in 1999 (Takekawa, personal communication 1997a).

Supervision/Enforcement

The Sanctuary is part of the National Wildlife Refuge Seabird Management Area, which is protected through preservation-oriented management and restriction of human use (USFWS 1985). Sanctuary and National Wildlife Refuge supervision is provided by WDFW commissioned law enforcement officers, a biologist (Schirato, personal communication 1997), a USFWS volunteer caretaker that lives on the island, and weekly visits to the island by USFWS maintenance staff, the Protection Island Refuge manager and a biologist (Edens 1997b).

Part time USFWS regulatory enforcement is provided by the Protection Island National Wildlife Refuge Manager and the Assistant Complex Manager (who is based at USFWS's Nisqually Complex). Other USFWS enforcement officers based in Olympia are available if needed (Sanguinetti, personal communication 1997). USFWS representatives use radar to determine if boats are entering the buffer zone, and boaters are informally approached to give them information about the zone (Takekawa, personal communication 1997a). WDFW enforcement officers also emphasize educational enforcement methods (Schirato, personal communication 1997).

Even with the regular presence of agency personnel, local recreational use has been identified by the USFWS as a primary threat to Protection Island's marine resources (Edens 1997b). Also, enforcement of the 2,000 foot ceiling for aircraft is difficult (Wingrove 1996).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

WDFW staff conduct marine mammal research projects, including counts and study of dispersal patterns. They also perform harlequin duck counts and monitor their survival, and take counts of other bird species, including rhinoceros auklets and marbled murrelets (Schirato, personal communication 1997). In the past (1980 and 1982), at least two human activity surveys combined with visitor education campaigns were carried out by the Washington Department of Game (Hirsch 1981; Cyra 1982).

Currently, the Sanctuary is not a focal point for WDFW on-site public education and outreach activities, as Protection Island is closed to public access (Schirato, personal communication 1997). The exception to this is occasional beach cleanups, which are arranged by the USFWS as needed and are tightly organized events which utilize volunteers from local organizations, such as the Port Townsend Marine Science Center (Sanguinetti, personal communication 1997). Regarding off-site WDFW outreach, officers occasionally provide educational talks to local groups (Schirato, personal communication 1997).

Outreach on the USFWS side is handled by one staffmember, who is responsible for conducting outreach for eight National Wildlife Refuges in Refuge Complex.

For More Information:

Washington Department of Fish and Wildlife
48 Devonshire Rd.
Montesano, WA 98563
Telephone: (360) 753-2806
Fax: (360) 664-0689

U.S. Fish and Wildlife Service
Washington Coastal Refuges
33 So. Barr Rd.
Port Angeles, WA 98362
Telephone: (360) 457-8451
Fax: (360) 457-9778

26. Tongue Point

Marine Life Sanctuary

Date(s) of Establishment: May 25, 1989

Establishing Agency/Organization(s): Clallam County Parks and Fair (CCPF) Department

Managing Agency/Organization(s): Clallam County Parks and Fair (CCPF) Department

County: Clallam

Location/Vicinity: Off of Salt Creek County Park, located at Tongue Point on the Strait of Juan de Fuca, between Joyce and Port Angeles (**see Map 29**).

Marine Boundary Description/Discussion: According to the County Parks Director, Clallam County owns tidelands adjacent to Salt Creek County Park from Tongue Point west to Salt Creek, following a survey line, while the Department of Natural Resources (DNR) manages the State-owned tidelands from Tongue Point east, adjacent to upland County Park property (Jacobs, personal communication 1997a). An 1989 interagency agreement with DNR allows for Clallam County to manage the entire marine area included in the Tongue Point Marine Life Sanctuary, including the State-owned portion (Jacobs, personal communication 1997a). This consists of the aquatic land area adjacent to the Salt Creek County Park and extends to a -10 foot point beyond the line of mean lower low water (MLLW) (DNR 1989a).

Adjacent or Overlapping Marine Protected Areas: None.

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES	Shoreline Length (if known)
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)		
yes	unknown	yes	unknown	no	n/a	unknown	apprx. 1 mi

Goals/Purpose/Objectives: The Marine Life Sanctuary was established to keep pedestrian visitors at Salt Creek County Park from harming the site's intertidal marine life or removing it from the site. The objective was to ensure future visitors could enjoy viewing these marine resources. Public recreational use is encouraged, with the caveat that visitors should observe but not touch marine life (Jacobs, personal communication 1997a).

Primary Legal Authority:

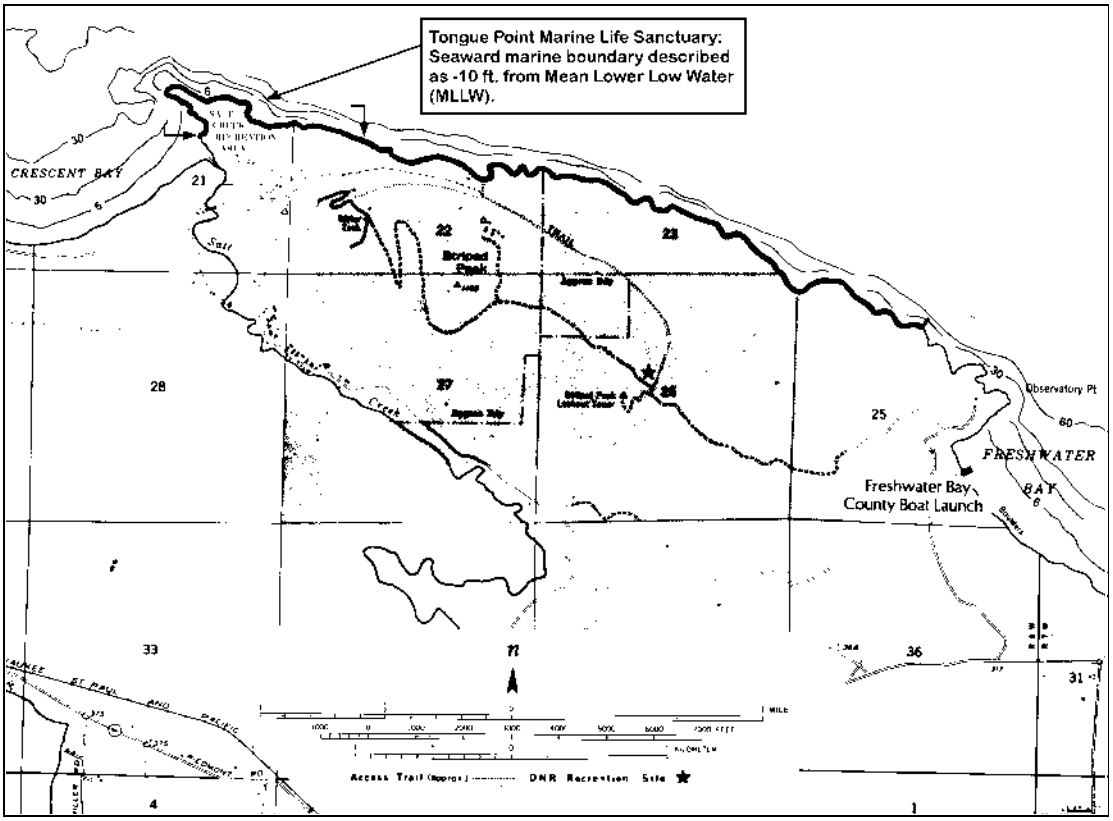
RCW 79.90.470: Aquatic lands—Use for public utility lines—Use for public parks or public recreation purposes—Lease of tidelands in front of public parks.

WAC 332.30.118(19): Aquatic Land management—Tidelands, shorelands and beds of navigable waters— Bedlands abutting upland parks will be considered for underwater parks.

WAC 332.30.151: Aquatic Land Management— Reserves.

C.C.C. 23.03.140: Preservation of public property, Salt Creek Recreation Area.

Map 29. Location of Tongue Point Marine Life Sanctuary



Map source: Washington Department of Natural Resources (DNR). 1981. Your Public Beaches: Strait of Juan de Fuca. Olympia, Washington. Revised, September 1984.

Natural and/or Cultural Resource Values/Highlights

Marine habitats at the Tongue Point Marine Life Sanctuary include tidepools, sand beach, and the east side of the mouth of Salt Creek estuary. Tongue Point is noted as the eastern-most located example of open coast rocky intertidal habitat in the Strait of Juan de Fuca. The site contains large mussel beds and other organisms found more often at Pacific coast rocky intertidal areas than in the Strait (Mumford, personal communication 1997). Urchins, chitons, starfish, anemones, and barnacles live on the substrate (Jacobs, personal communication 1997a). The urchins are commercially harvested (Shaffer 1997b)

Concentrations of marbled murrelets have been observed near Tongue Point, as well as breeding black oystercatchers and pigeon guillemots (Speich and Wahl 1989). There is a wreck offshore which supports a variety of marine invertebrates, and recreational diving and spear fishing are popular activities (Major 1991). The bottom terrain consists of a basalt reef that extends under the water approximately one quarter mile beyond shore to the northwest. Bull kelp beds (*Nerocystis luetkeana*) border the northern and eastern edges of the reef to a depth of thirty feet; mixed gian kelp (*Macrocystis integrifolia*) and bull kelp beds are found to the south and west. The adjacent bay supports an extensive eelgrass bed (Shaffer 1997b). Beyond the reef, whales, sea lions (Lundquist and Parker 1997a), river otters, and seals are frequently sighted (Jacobs, personal communication 1997a).

At the adjacent Salt Creek County Park, there are hiking trails which afford views of the Sanctuary (CCPF n.d.a.), and remains from the historic World War II-era Fort Hayden (CCPF n.d.b.). Archeological remains of a Klallam camp or village site in the Park provides evidence of local shellfish gathering by the Klallam (Shaffer, personal communication 1997b).

Restrictions on Human Activities to Protect Marine Resources

Under County ordinance, the following rules apply to the Salt Creek Recreation Area (C.C.C. 23.03.140):

- Removal of driftwood or any form of marine life from the Salt Creek Recreation Area is not allowed, except by permit. Marine life includes starfish, anemones, etc., but does not apply to fish caught by sport fishing or to clams, crabs, or mussels gathered during the season so long as the legal limits are observed.

- Marine life may be removed with a permit for legitimate and serious scientific studies and purposes. To be considered, the project must be for research purposes rather than for teaching purposes; must be intended to result in a document which will make the project results available to the public; removal of marine life must be essential to project; and the extent of marine life to be removed must be described.

- Pets at Salt Creek County Park must be kept on a leash and visitors must clean up after their pets (CCPF n.d.a.).

- In addition, no animal or plant matter or direct or indirect products thereof may be injured or removed from any Clallam County Park without prior permission from the Park Director.

According to the County Parks Director, the "no-take" regulations are applicable to the intertidal area, but not the subtidal zone (Jacobs, personal communication 1997b).

MANAGEMENT OF THE SITE

Planning

Fort Hayden originally occupied the Salt Creek County Park and Marine Life Sanctuary area in the 1940s. The Fort infrastructure included a wharf, which extended into what is now the Sanctuary (the wharf was torn down after the end of World War II). The site was put up for sale in 1949, and after years of debate was purchased by Clallam County for use as a recreation area (CCPF n.d.b.).

In 1989, an interagency agreement between DNR and Clallam County was put into place allowing the County to manage the State-owned tidelands and bedlands in the Marine Life Sanctuary (DNR 1989a). The Sanctuary was established due to increasing problems and concerns with collection of marine resources—especially intertidal organisms—and was created following an Advisory Park Board's recommendation to the Park Commissioners. The Marine Life Sanctuary was designated through the County Park Board's regular public hearing process (Jacobs, personal communication 1997a).

No initiatives are currently underway to update plans or change the management of the area. There are no outstanding management problems noted concerning the site's function as a public viewing area for marine resources (Jacobs, personal communication 1997a).

Supervision/Enforcement

There is one Salt Creek County Park deputy officer on site year round, who watches closely for violations (Jacobs, personal communication 1997b). Some urchin fishing does occur, as well as collection of other organisms and spear fishing (Shaffer, personal communication 1997a). Clallam County does not enforce regulations on or under the water; the Park officer concentrates on shore-based activities which can be observed as part of routine land-based patrols, and over which the proper authority exists for enforcement. These activities are primarily damage to or collection of intertidal marine resources (Jacobs, personal communication 1997a). Sport fishing, which is allowed as described above under "Restrictions," occurs on an infrequent basis (Jacobs, personal communication 1997b).

In addition to the staff supervision, there are interpretive signs posted at every trailhead. Designed in the early 1980s, the signs describe the kelp and tidepool life in the Sanctuary as well as "look but don't touch" rules (Mumford, personal communication 1997; Jacobs, personal communication 1997a).

Shore visitors normally follow County rules for the Sanctuary, or cease their activities if the County officer explains the rules to them (Jacobs, personal communication 1997a). It is not clear how urchin fishing, scuba diving, or other water activities may be impacting the ecosystem, or to what extent violations of regulations other than County rules for the site may be occurring.

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

The site is a popular destination for the visiting public. An educational brochure for Fort Hayden, located on the Salt Creek County Park uplands, states that beachcombing and fishing are popular activities at the Park (Clallam County Parks and Fair n.d.b.), and school groups visit the Sanctuary frequently (Jacobs, personal communication 1997b).

Regarding research activities, the Sanctuary is not a focus for Park-sponsored research at this time. This is due to low visitor impacts on the tidepools and lack of research funds (Jacobs, personal communication 1997a). Over the last fifteen years, outside organizations have submitted only 2 or 3 research permit applications (Jacobs, personal communication 1997b).

For More Information:

Clallam County Parks and Fair Department
P.O. Box 863
Port Angeles, WA 98362-0149
Telephone: (360) 417-2291

27. Yellow Island

Nature Conservancy Preserve

Date(s) of Establishment: May, 1980

Establishing Agency/Organization(s): The Nature Conservancy of Washington

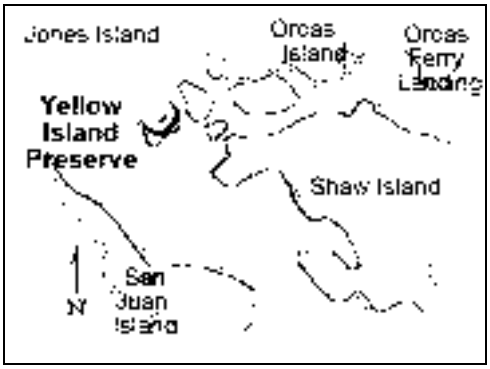
Managing Agency/Organization(s): The Nature Conservancy of Washington

County: San Juan

Location/Vicinity: Yellow Island, in the San Juan Archipelago northeast of San Juan Island (See **Map 30**).

Marine Boundary Description/Discussion: The preserve is predominantly upland-based. In the same year the preserve was designated (1980), the Washington Department of Natural Resources (DNR) removed the island's tidelands from leasable status and provided that these lands were to be "reserved from conflicting uses" (Unland, personal communication 1997). The island's narrow intertidal zone is within purview of management by on-site TNC staff.

Map 30. Location of Yellow Island Nature Conservancy Preserve



Source: The Nature Conservancy of Washington

Adjacent or Overlapping Protected Areas: San Juan Islands Marine Preserve Area at Yellow Island (includes tidelands and bedlands within 300 yards of Yellow Island); San Juan & Cypress Island Marine Biological Preserve.

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES	Shoreline Length
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)		
no	0	yes	unknown	yes	unknown	10	unknown

Goals/Purpose/Objectives: The Nature Conservancy is a private non-profit organization dedicated to preserving plants, animals and natural communities that represent the diversity of life by protecting the lands and waters they need to survive. Just as with Natural Area Preserves established through the DNR's Natural Heritage Program (a program the Conservancy helped start in 1977 and DNR now administers) (TNC 1997a), Nature Conservancy Preserves are established to protect high quality examples of typical or unique natural features in Washington State, with primary emphasis given to rare plant or animal communities. Nature Conservancy Preserves are dedicated to scientific study, education and the observation of nature (Gordon 1993).

Management goals specific to the San Juan Island Nature Conservancy Preserves are: 1) to preserve, protect, and maintain natural communities, native plants, and wildlife with emphasis on threatened and endangered species; 2) to encourage scientific research on preserves; and 3) to promote environmental education (Johns 1993). The Yellow Island Preserve is actively managed by The Nature Conservancy to restore and maintain the natural and unique habitats of the island, protect its wildlife, and allow closely supervised public visitation (TNC 1996b).

Primary Legal Authority:

The legal rights of a private property owner.
Leasable status of adjacent tidelands: Aquatic Lands Act (RCW 79.90 - 79.96).
Aquatic Land Management WAC Chapter 332-30.

Natural and Cultural Resource Values/Highlights

Grasslands are the primary feature protected at Yellow Island Preserve, which is a long, thin island, with sand spits at each end and a belt of evergreens in the middle (TNC 1997a). The undeveloped and ungrazed fescue meadows of the island feature the most diverse (over 150 species) and densest populations of wildflowers in the San Juan Islands (Gordon 1993). There is also a reef which is periodically exposed, and eelgrass grows offshore (Pritchard, personal communication 1997).

Harbor seals and river otters use the sandy beach and rocky intertidal habitats, while orca and minke whales, porpoises and sea lions are found in the offshore waters. Marine-dependent or associated birds include harlequin ducks, bald eagles, gulls, and black oystercatchers, among others. Common intertidal organisms include oysters and mussels (Gordon 1993; TNC 1996b; Pritchard 1997).

Restrictions on Human Activities to Protect Marine Resources

At all Washington Nature Conservancy Preserves, the following restrictions are in effect (Gordon 1993; TNC, unpublished 1997b).

- No hunting or trapping
- No collecting plants or animals or their remains
- No camping
- No campfires
- No smoking
- No horses
- No bicycles or other off-road vehicles
- No pets (except seeing-eye dogs)

There is also a prohibition on fishing at Nature Conservancy preserves which is described by a former preserves manager as pertaining to those visitors that might attempt to fish while on Preserve property (Johns, personal communication 1996). The intent of the "no collecting" restriction is that it is generally applicable to the intertidal zone as well as the uplands (Johns, personal communication 1997).

The public tidelands around the island were withdrawn in 1980 from leasable status by DNR, and are to be protected from conflicting uses (Unland, personal communication 1997). Additionally, because Yellow Island is surrounded by a San Juan Islands Marine Preserve Area extending to 300 yards offshore (see Site 2), additional fishing restrictions apply that prohibit the take of shellfish (WAC 220-56-307), bottomfish (WAC 220-56-230) or food fish (WAC 220-20-020), excepting herring and commercial salmon fishing (WAC 220-20-020).

The Yellow Island Preserve is open year-round for visit from 10:00 am to 4:00 pm only. Visitors are asked to remain on established trails, and groups larger than six people must make reservations. Private boat landings are permitted only on the south beach east of the cabin (TNC 1997b). Small boats and kayaks may not be beached on the spits; camping or overnight mooring are not allowed; and visitors are asked not to bring food or beverages on to the island (TNC 1997a).

MANAGEMENT OF THE SITE

Planning

There is a management plan for the San Juan Islands Preserves, and a separate plan for Yellow Island[18]. The San Juan Islands Preserves plan includes such elements as (Johns, personal communication 1997):

- Legal and physical description; maps and photographs
- Acquisition information

[18] Site-specific management plans for San Juan Islands Nature Conservancy preserves could not be obtained for this study.

- Leases or cooperative arrangements
- Elements of communities; species lists
- Visitor status
- Summary of research conducted
- Management objectives, which include ecological and management actions, research policies and parameters, restrictions policies, volunteer policies, visitor use plans, ecological use plans, and weed management plans
- Socio-political concerns
- Action plan

Because they are private preserves, the public is not involved in planning for The Nature Conservancy Preserves in Washington. Management does consult with academics, biologists, and staff from the Natural Heritage Program (Kramme, personal communication 1997).

On Yellow Island there has been an ongoing and successful program of prescribed burning of grasslands, planting of native bunchgrasses and the removal of non-native plant species, which has required careful management planning. The intertidal and marine resources of the island have not received the same level of consideration and management planning due to the Preserve's primary focus on upland ecosystems; however, in the past three years, increasing emphasis has been put on protecting the shore (Pritchard, personal communication 1997).

Supervision/Enforcement

There is a resident preserve manager at Yellow Island (Kramme, personal communication 1996). While employed only seasonally by The Nature Conservancy, the preserve manager is present year-round (Johns, personal communication 1997). Signs are posted to advise and educate visitors about the Preserve and its restrictions. The Conservancy staff discourage intertidal activities that might be in violation of restrictions in place for the adjacent San Juan Island Marine Preserve Area, which is located from shore to 300 yards offshore. TNC staff hand out written materials documenting applicable state fishing regulations to fishers and explain the reasoning behind Conservancy rules to preserve visitors (Johns, personal communication 1997).

At all TNC marine protected area sites in the San Juan Islands, there is increasing recreational use of the waters, such as by sea kayakers, and some trespassing, which may result in disturbance to seabird colonies and marine mammals (Johns, personal communication 1997). According to the accounts of on-site management, recreational fishing violations do occur within the adjacent San Juan Island Marine Preserve, and on-water policing appears insufficient to prevent such actions (Pritchard, personal communication 1997).

Sentinel Island and Yellow Island were acquired following a TNC fundraising campaign, and as of 1993, there was a $200,000 endowment for the management of the two islands (Gordon 1993).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

Abutting this Nature Conservancy preserve site is the surrounding 300-yard intertidal and subtidal Marine Preserve Area, one of five such areas in the San Juan Islands that have been set aside for the primary purpose of preserving undisturbed and unharvested marine ecosystems to facilitate scientific research (see Site 2) (Duggins, personal communication 1997; Staude, personal communication 1997). The intertidal fringe of the Nature Conservancy's Yellow Island Preserve is thus a focal point for marine research projects that are approved by the University of Washington's Friday Harbor Laboratories (FHL), which conducts weekly or biweekly monitoring (Pritchard, personal communication 1997). FHL staff and students have conducted a great deal of marine research in the area, including kelp productivity and geology research. Additional information on this research is available from FHL.

The Nature Conservancy monitors the upland plant communities (Johns, personal communication 1997), an essential function given the very active level of management occurring on Yellow Island (prescribed grassland burning and restoration, exotic plant species removal, and the like). The resident steward assists with monitoring, restoration projects, and control of invasive species (TNC 1996b). Through the resident steward, the public is educated about the Preserve, including natural features and restrictions (Johns, personal communication 1997).

TNC works with various government organizations in cooperative and partnership roles at all of its San Juan Islands Preserves. Staff support the Marine Mammal Stranding Network and the Islands Oil Spill Association by participating in training, drills, and response to incidents involving TNC lands or adjacent waters. They also volunteer to help the U.S. Fish and Wildlife Service to record natural and human activities at nearby National Wildlife Refuge sites in the San Juan Islands; monitor compliance with regulations at the University of Washington’s Marine Research Reserves; and monitor bald eagle nesting for WDFW. They also help Whale Museum researchers by reporting on marine mammal activity (Johns 1993).

For More Information:

The Nature Conservancy of Washington
217 Pine St., Suite 1100
Seattle, WA 98101
Telephone: (206) 343-4344
Fax: (206) 343-5608
Home page: http://www.tnc-washington.org/

28. Chuckanut Island/Cyrus Gates Memorial

Nature Conservancy Preserve

Date(s) of Establishment: December, 1976

Establishing Agency/Organization(s): The Nature Conservancy of Washington

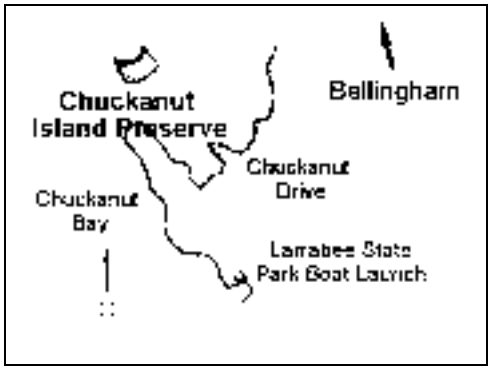
Managing Agency/Organization(s): The Nature Conservancy of Washington

County: Whatcom

Location/Vicinity: Chuckanut Island, in Whatcom County, located in Chuckanut Bay, just south of Bellingham Bay. The Island is north of Governor's Point and Chuckanut Point (**Map 31**).

Marine Boundary Description/Discussion: TNC owns the second class tidelands at this Preserve (Kramme, personal communication 1998), and on-site TNC staff manage the tideland area, with some exceptions, as part of the Preserve (Johns, personal communication 1997).

MAP 31. Location of the Nature Conservancy's Chuckanut Island/Cyrus Gates Memorial Preserve



Source: The Nature Conservancy of Washington

Adjacent or Overlapping Protected Areas: None

Current Size and Components

SUBTIDAL		INTERTIDAL		UPLAND		TOTAL ACRES	Shoreline Length
included (yes / no)	acres (if known)	included (yes / no)	acres (if known)	included (yes / no)	acres (if known)		
no	0	yes	unknown	yes	unknown	5.2	1760 feet

Goals/Purpose/Objectives: The Nature Conservancy is a private non-profit organization dedicated to preserving plants, animals and natural communities that represent the diversity of life by protecting the lands and waters they need to survive. Just as with Natural Area Preserves established through the DNR's Natural Heritage Program (a program the Conservancy helped start in 1977 and DNR now administers) (TNC 1997a), Nature Conservancy Preserves are established to protect high quality examples of typical or unique natural features in Washington State, with primary emphasis given to rare plant or animal communities. Nature Conservancy Preserves are dedicated to scientific study, education and the observation of nature (Gordon 1993).

Management goals specific to the San Juan Island Nature Conservancy Preserves (including Chuckanut Island) are: 1) to preserve, protect, and maintain natural communities, native plants, and wildlife with emphasis on threatened and endangered species; 2) to encourage scientific research on preserves; and 3) to promote environmental education (Johns 1993).

Primary Legal Authority:

The legal rights of a private property owner.
Leasable status of adjacent tidelands: Aquatic Lands Act (RCW 79.90 - 79.96) ;
Aquatic Land Management WAC Chapter 332-30.

Natural and Cultural Resource Values/Highlights

The Preserve's rich intertidal zone has been noted as being home to more than 55 marine invertebrate species, such as barnacles, snails, rock crabs, scallops, sea cucumbers, limpets, hermit crabs, butter clams, horse clams, and blue mud shrimp. The island also provides habitat for one threatened species. Surfbirds, which winter in Chuckanut Bay, often rest on the island. The island's uplands feature stands of Douglas and grand fir, madrone and red cedar. Because of a lack of fresh water, human impact has been slight (Gordon 1993).

Restrictions on Human Activities to Protect Marine Resources

At all Washington Nature Conservancy Preserves, the following restrictions are in effect (Gordon 1993; TNC, unpublished 1997b).

- No hunting or trapping
- No collecting plants or animals or their remains
- No camping
- No campfires
- No smoking

continued

- No horses
- No bicycles or other off-road vehicles
- No pets (except seeing-eye dogs)

There is also a prohibition on fishing at Nature Conservancy preserves which is described by a former preserves manager as pertaining to those visitors that might attempt to fish while on Preserve property (Johns, personal communication 1996). The intent of the "no collecting" restriction is that it is generally applicable to the intertidal zone as well as the uplands (Johns, personal communication 1997).

Chuckanut Island is open to the public from dawn until dusk. Private boat landings are directed to beaches on the west and northeast shores of the island. Visitors are directed to stay on trails (Gordon 1993).

MANAGEMENT OF THE SITE

Planning

There is a management plan for the San Juan Islands Preserves, and a separate plan for Chuckanut Island[19]. The San Juan Islands Preserves plan includes such elements as (Johns, personal communication 1997):

- Legal and physical description; maps and photographs
- Acquisition information
- Leases or cooperative arrangements
- Elements of communities; species lists
- Visitor status
- Summary of research conducted
- Management objectives, which include ecological and management actions, research policies and parameters, restrictions policies, volunteer policies, visitor use plans, ecological use plans, and weed management plans
- Socio-political concerns
- Action plan

Because they are private preserves, the public is not involved in planning for The Nature Conservancy Preserves in Washington. Management does consult with academics, biologists, and staff from the Natural Heritage Program (Kramme, personal communication 1997).

Supervision/Enforcement

Although there is no on-site manager at Chuckanut Island, a volunteer steward periodically visits the Preserve (Kramme, personal communication 1996). When intertidal activities are observed, they are discouraged by stewards and staff (Johns, 1997). Nearby residents are said to be

[19] Site-specific management plans for San Juan Islands Nature Conservancy preserves could not be obtained for this study.

attentive and protective of the Preserve (Gordon 1993). Signs are posted to advise and educate visitors about the Preserve and its restrictions.

At all TNC marine protected area sites in the San Juan Islands, there is increasing recreational use of the waters, such as by sea kayakers, and some trespassing, which may result in disturbance to seabird colonies and marine mammals (Johns, personal communication 1997).

Additional Programs: Research, Monitoring, Education, Outreach, Public Involvement

Limited site-specific information available. Marine- and intertidal-oriented research has been carried out at Chuckanut Island by students from Western Washington University, and one researcher, R. Sanders, performed a marine baseline survey in 1976 (Johns, personal communication 1997).

TNC works with various government organizations in cooperative and partnership roles at all of its San Juan Islands Preserves. Staff support the Marine Mammal Stranding Network and the Islands Oil Spill Association by participating in training, drills, and response to incidents involving TNC lands or adjacent waters. They also volunteer to help the U.S. Fish and Wildlife Service to record natural and human activities at nearby National Wildlife Refuge sites in the San Juan Islands; monitor compliance with regulations at the University of Washington's Marine Research Reserves; and monitor bald eagle nesting for WDFW. They also help Whale Museum researchers by reporting on marine mammal activity (Johns 1993).

For More Information:

The Nature Conservancy of Washington
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Seattle, WA 98101
Telephone: (206) 343-4344
Fax: (206) 343-5608
Home page: http://www.tnc-washington.org/